

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: February 2003
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APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-05	R-1 ITEM NOMENCLATURE 0604518N Combat Information Center Conversion
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COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	5.070	0.000	21.244	16.489	15.328	13.061	12.943	0.000
Q3094 / Common Undersea Picture	0.000	0.000	18.045	16.300	15.139	12.970	12.943	0.000
K1604 / NTDS Software Improvement	5.070	0.000	3.199	0.189	0.189	0.091	0.000	0.000

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The objective of this Program Element (PE), Project Q3094, is to integrate several current USW developmental technologies covered under Global Command and Control System - Maritime (GCCS-M) Operational Requirements Document (ORD) 510-06-99 (signed 02/99) to produce an integrated Common Undersea Picture (CUP) for use by Carrier Battle Group (CVBG) air, surface, submarine, and surveillance USW and MIW assets. A CUP Peer Review Group will select technologies to be incorporated into a build-test-build process to develop a net-centric USW Capability. Significant improvements will be made to USW multi-platform mission planning and evaluation, vulnerability assessment, situational awareness, collaborative communications, prosecution and execution, training, Operator Machine Interface (OMI), and operational reconstruction and analysis. CUP will align with and build upon common architectures including GCCS-M and Horizontal Integration (HI), incorporating "Best of Best" applications into a common Sea Combat Commander/Carrier Task Force Toolset. Successive Engineering Development Model (EDM) builds will be delivered to the GCCS-M Program of Record for production and fleet fielding.

This PE, under Project K1604 in FY 2002, also supports Common Command and Decision (CC&D) capability, a pre-planned product improvement (P³I) to the AEGIS Weapon System (AWS) and the Ship Self-Defense System (SSDS) MK 2 that replaces the command and decision capability presently in these systems with a common computer program. This effort will avoid future life-cycle costs by reducing the number of computer programs that must be maintained, enable the Navy to field new or modified warfighting capability by eliminating the redundant, conflicting processing present in existing systems. CC&D is a critical step toward developing systems that will resolve long-term inoperability problems and achieve improvements in the air picture.

This program was transferred to Program Element (PE) 0604307N, AEGIS Combat System Engineering, Project K1447, in FY 2003.

This PE, under Project K1604 in FY 2004 - 2007, will fund the Advanced Combat Direction System (ACDS) Block 0 and Shipboard Gridlock System/Auto Correlation (SGS/AC) Baseline 5.1 computer program upgrade to resolve the assigned Joint Combat Identification Evaluation Team (JCIET) Single Integrated Air Picture (SIAP) warfighting shortfalls. The purpose is to provide a common correlation/decorrelation scheme among all services giving the warfare commanders a Single Integrated Air Picture (SIAP). The correlation Interoperability Change Proposal (ICP) driven changes would apply to the ACDS Block 0 program with functionality changes being implemented in SGS/AC as well, in order to implement a M9 message (Link 11). This ICP will eliminate cluttered tactical picture and improve operator workload and optimize the allocation of weapons and threats.

Defense Emergency Response Funds (DERF) Funds:

Not Applicable

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-05		PROGRAM ELEMENT NUMBER AND NAME 0604518N Combat Information Center Conversion			PROJECT NUMBER AND NAME Q3094 / Common Undersea Picture			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	0.000	0.000	18.045	16.300	15.139	12.970	12.943	0.000
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This Program Element (PE), Project Q3094, will leverage technologies from several current USW development efforts and developers tool sets through a peer reviewed technology selection and evolutionary development build/test/build process to develop a Common Undersea Picture (CUP) capability for Carrier Battle Group USW Surface, Submarine, Air, and support assets. Significant improvements will be made to USW multi-platform mission planning and evaluation, vulnerability assessment, situational awareness, collaborative communications, prosecution and execution, training, OMI, and operational reconstruction and analysis. CUP will align and build upon common architectures including GCCS-M and HI, incorporating the "Best of Best" applications into a common Sea Combat Commander/CTF Toolset planned for installation on two CVBGs per year beginning in FY04.

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B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
CUP GCCS-M, DII-COE Integration			1.230	1.356
RDT&E Articles Quantity				

Defense Information Infrastructure-Common Operating Environment (DII-COE), Global Command and Control System - Maritime (GCCS-M) Licenses and integration, Command and Control (C2), network and security

	FY 02	FY 03	FY 04	FY 05
CUP Requirements Analysis			1.652	1.778
RDT&E Articles Quantity				

Requirements analysis and design; mission planning and evaluation, vulnerability assessment, situational awareness, collaborative communications, prosecution and execution, training, Operator Machine Interface (OMI) and operational reconstruction and analysis

	FY 02	FY 03	FY 04	FY 05
CUP TDA Support			1.822	2.391
RDT&E Articles Quantity				

Technical Design Agent (TDA) support; Peer Review Group technology developments and successive EDM Build software development and modification

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-05	PROGRAM ELEMENT NUMBER AND NAME 0604518N Combat Information Center Conversion	PROJECT NUMBER AND NAME Q3094 / Common Undersea Picture

B. Accomplishments/Planned Program (Cont.)

	FY 02	FY 03	FY 04	FY 05
CUP Carrier Integration			1.036	1.186
RDT&E Articles Quantity				

Carrier Tactical Support Center (TSC) Integration; Tactical Decision Aids (TDAs), management and communication of contact/track data

	FY 02	FY 03	FY 04	FY 05
CUP EDM Platform Integration/Application Development			12.305	9.589
RDT&E Articles Quantity				1

Begin Build 1 EDM development and integration; incorporate Peer Review Group technology developments into the build-test-build process, integrate air, surface, submarine and surveillance and MIW assets, and develop evolutionary embedded training and ILS support documentation. Complete EDM Build 1, coordinate and conduct At-Sea test and deliver to GCCS-M for production build in FY 2005.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-05	PROGRAM ELEMENT NUMBER AND NAME 0604518N Combat Information Center Conversion	PROJECT NUMBER AND NAME Q3094 / Common Undersea Picture			
C. PROGRAM CHANGE SUMMARY:					
		FY 2002	FY 2003	FY 2004	FY2005
Previous President's Budget: (FY03 Pres Controls) :		0.000	0.000	0.000	0.000
Current BES/President's Budget (FY04 President Controls)		0.000	0.000	18.045	16.300
Total Adjustments		0.000	0.000	18.045	16.300
Summary of Adjustments					
Miscellaneous Adjustments				-0.555	-0.500
Reprogrammings				18.600	16.800
Subtotal		0.000	0.000	18.045	16.300
Schedule:					
Not Applicable					
Technical:					
Not Applicable					

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Exhibit R-2a, RDTEEN Project Justification
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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-05			PROGRAM ELEMENT NUMBER AND NAME 0604518N Combat Information Center Conversion				PROJECT NUMBER AND NAME Q3094 / Common Undersea Picture			
D. OTHER PROGRAM FUNDING SUMMARY:										
<u>Line Item No. & Name</u> Not Applicable	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Complete</u>	<u>Total Cost</u>
E. ACQUISITION STRATEGY:										
<ul style="list-style-type: none"> - Prime contractor award planned 2Q FY 2004. - Successive EDM builds to be developed, tested and delivered to GCCS-M program of record for production and fleet fielding. 										
F. MAJOR PERFORMERS:										
<ul style="list-style-type: none"> - Johns Hopkins University Applied Physics Laboratory (JHU/APL), MD - CUP Technical Design Agent and Test & Evaluation support - Naval Undersea Warfare Center, Newport, RI - CUP Technical Design Agent support - Naval Surface Warfare Center, Dahlgren, VA - CUP requirements analysis, surface ship integration and mission planning support - Naval Undersea Warfare Center Keyport, WA - CUP Carrier integration and track management - SPAWAR Systems Center, San Diego, CA - Defense Information Infrastructure-Common Operating Environment (DII-COE), GCCS-M, Command and Control (C2) collaboration tools, network and security certifications 										

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Exhibit R-3 Cost Analysis (page 2)										DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-05			0604518N Combat Information Center Conversion			Q3094 / Common Undersea Picture						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
At-Sea Test & Evaluation	Var.	Var.	0.000					0.300	11/04	Continuing	Continuing	
Subtotal T&E			0.000	0.000		0.000		0.300		Continuing	Continuing	
Remarks:												
Program Management Support	Var.	Var.	0.000			0.410	11/03	0.420	11/04	Continuing	Continuing	
Subtotal Management			0.000	0.000		0.410		0.420		Continuing	Continuing	
Remarks:												
Total Cost			0.000	0.000		18.045		16.300		Continuing	Continuing	
Remarks:												

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EXHIBIT R4, Schedule Profile																									DATE: February 2003									
APPROPRIATION/BUDGET ACTIVITY								PROGRAM ELEMENT NUMBER AND NAME								PROJECT NUMBER AND NAME																		
RDT&E, N / BA-05								0604518N Combat Information Center Conversion								Q3094 / Common Undersea Picture																		
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
Acquisition/Contract Milestones/Reviews									Contract Award △																									
Common Undersea Picture System Development Builds 1/2/3									Build 1 △					Build 2 △									Build 3 △											
Common Undersea Picture Software Delivery to GCCS-M for Production Build															Build 1 △											Build 2 △								
Test & Evaluation Milestones															Build 1											Build 2								
Common Undersea Picture At-Sea Tests															△											△								
Production Milestones																																		
Deliveries																			CVBG △	CVBG △											CVBG △	CVBG △		

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Exhibit R-4, Schedule Profile
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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-05		PROGRAM ELEMENT NUMBER AND NAME 0604518N Combat Information Center Conversion			PROJECT NUMBER AND NAME K1604 / NTDS Software Improvement/Common C&D			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	5.070	0.000	3.199	0.189	0.189	0.091	0.000	0.000
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

FY 2002: Common Command and Decision (CC&D) capability is a pre-planned product improvement (P³I) to the AEGIS Weapon System (AWS) and the Ship Self Defense System (SSDS) MK 2 that replaces the C&D capability presently in these systems with a common computer program. This effort will avoid future life-cycle costs by reducing the number of computer programs that must be maintained and enabling the Navy to field new or modified warfighting capability by eliminating the redundant, conflicting processing present in existing systems. CC&D is a critical step toward developing systems that will resolve long-term interoperability problems and achieve improvements in the air picture.

This program was transferred to Program Element (PE) 0604307N, AEGIS Combat System Engineering, Project K1447, in FY 2003.

FY 2004-2007: This PE, under Project K1604, will fund the Advanced Combat Direction System (ACDS) Block 0 and Shipboard Gridlock System/Auto Correlation (SGS/AC) Baseline 5.1 computer program upgrade to resolve the assigned Joint Combat Identification Evaluation Team (JCIET) Single Integrated Air Picture (SIAP) warfighting shortfalls. The purpose is to provide a common correlation/decorrelation scheme among all services giving the warfare commanders a Single Integrated Air Picture (SIAP). The correlation Interoperability Change Proposal (ICP) driven changes would apply to the ACDS Block 0 program with functionality changes being implemented in SGS/AC as well, in order to implement a M9 message (Link 11). This ICP will eliminate cluttered tactical picture and improve operator workload and optimize the allocation of weapons and threats.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-05	PROGRAM ELEMENT NUMBER AND NAME 0604518N Combat Information Center Conversion	PROJECT NUMBER AND NAME K1604 / NTDS Software Improvement/Common C&D
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B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
CC&D Engineering & Acquisition Technical Mgmt.	5.070			
RDT&E Articles Quantity				

Continue design engineering, technical management, and acquisition management of the Common Command and Decision (CC&D) capability/methodology.

	FY 02	FY 03	FY 04	FY 05
Computer Program Development & Sys. Integration			3.199	0.189
RDT&E Articles Quantity				

Complete computer program development upgrades to SGS/AC Baseline 5.1 and ACDS Block 0 for the Amphibious class ships. Complete systems integration efforts and test between ACDS Block 0 and SGS/AC baseline 5.1 and begin software deliveries.

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost				
RDT&E Articles Quantity				

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APPROPRIATION/BUDGET ACTIVITY BA-05	PROGRAM ELEMENT NUMBER AND NAME 0604518N Combat Information Center Conversion	PROJECT NUMBER AND NAME K1604 / NTDS Software Improvement/Common C&D			
C. PROGRAM CHANGE SUMMARY:					
Funding:		FY 2002	FY 2003	FY 2004	FY 2005
Previous President's Budget: (FY 03 Pres Controls)		5.344	0.000	0.000	0.000
Current BES/President's Budget: (FY04/05 Pres Controls)		5.070	0.000	3.199	0.189
Total Adjustments		-0.274	0.000	3.199	0.189
Summary of Adjustments					
Congressional program reductions					
Congressional undistributed reductions					
Congressional rescissions					
SBIR/STTR Transfer		-0.117			
Economic Assumptions/Miscellaneous Adjustments		-0.052		-0.201	-0.011
Reprogrammings		-0.105		3.400	0.200
Congressional increases					
Subtotal		-0.274	0.000	3.199	0.189
Schedule:					
Technical:					

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D. OTHER PROGRAM FUNDING SUMMARY:										
<u>Line Item No. & Name</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Complete</u>	<u>Total Cost</u>
0604307N / AEGIS Open Architecture	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2
E. ACQUISITION STRATEGY:										
The acquisition management of this particular effort is for the Software Support Activities (SSA) for ACDS Block O and SGS/AC and fund the facilities to implement the required computer program changes, complete the integration effort, test and deliver.										
F. MAJOR PERFORMERS:										
Naval Surface Warfare Center (NSWC) Dahlgren Division located in Dahlgren, Virginia is the Software Support Agent (SSA) for the SGS/AC baseline 5.1 program. Funds will be placed on a work request in 10/03.										
Naval Surface Warfare Center (NSWC) Dam Neck Division located in Virginia Beach, Virginia is the Software Support Agent (SSA) for the ACDS Block O program. Funds will be placed on a work request in 10/03.										

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APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-05			0604518N Combat Information Center Conversion			K1604/NTDS Software Improvement/Common C&D						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
DT/OT Test, Test Spt., IV&V Efforts	VAR	Various	21.786							0.000	21.786	
Subtotal T&E			21.786	0.000		0.000		0.000		0.000	21.786	
Remarks:												
Resource Management Support	VAR	Various	1.025							0.000	1.025	
Contractor Engineering Support	VAR	Various	0.250							0.000	0.250	
Program Management Support	VAR	Various	1.867							0.000	1.867	
Travel	VAR	Various	0.179							0.000	0.179	
Subtotal Management			3.321	0.000		0.000		0.000		0.000	3.321	
Remarks:												
Total Cost			242.022	0.000		3.199		0.189		0.280	245.690	
Remarks:												

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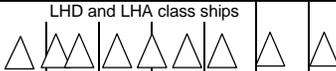
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Exhibit R-3, Project Cost Analysis
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EXHIBIT R4, Schedule Profile																										DATE: February 2003						
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-05										PROGRAM ELEMENT NUMBER AND NAME 0604518N Combat Information Center Conversion										PROJECT NUMBER AND NAME K1604/NTDS Software Improvement/Common C&D												
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones																																
Prototype Phase																																
ACDS Block 0 System Upgrade Effort																																
SGS/AC System Upgrade Effort																																
Software																																
Test & Evaluation Milestones																																
Combat System Integration Test (CSIT)																																
Production Milestones																																
Not Applicable																																
Deliveries																																

LHD and LHA class ships


CSIT

